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AUTHOR Kelly, Lily M.; Lahey, Benjamin
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ABSTRACT

Considerable research and theory have focused on the concept of life stress, defined as major changes occurring in an individual's life, such as divorce, loss of employment, or the death of a significant other. To examine the role of irrational beliefs in the life stress-depression relationship, 286 college students completed the Beck Depression Inventory (BDI), the Life Experiences Survey (LES) and the Irrational Belief Test (IBT). As in previous research, significant positive correlations were found between the LES and BDI. There were also significant correlations between the IBT and BDI, as well as for five specific subtests of the IBT. The moderating effect was analyzed by examining the correlations between the LES and BDI for each quartile of the IBT. No systematic pattern of correlations emerged. The IBT was not a moderator of the life stress-depression correlations for this sample. The fact that significant relationships between irrational beliefs and depression were found, while no relationship between varying degrees of irrationality and the life stress-depression relationship were obtained, constitutes a need for reevaluation of the view that cognitions are a crucial agent for change with depressed persons. It may be that irrational beliefs are cognitive aspects of the depressed state as opposed to causal agents in depression. (Author/JAC)

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Irrational Beliefs as Moderators of the Life Stress-Depression Relationship

Lily M. Kelly, PhD.
Howard University

and

Benjamin Lahey, PhD.
University of Georgia

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Abstract

Problem

Considerable theory and research have focused on the concept of "life stress" in recent years. Life stress is defined as major changes such as divorce.. loss of employment or death of a significant other occurring in an individual's life.

Two instruments have been widely used to assess life stress, the Survey of Recent Events (SRE) (Holmes and Rahe 1967) and the Life Experiences Survey (LES) (Sarason. Johnson. and Siegel. 1978).

While research has supported the relationship between life stress and depression, the weak correlations may be accounted for by variables operating within the relationship. The degree to which life stress is associated with depression may be a function of moderating environ mental or personal characteristics.

While a considerable number of theories have supported the notion that depressed persons distort the environment. few attempts have been made to empirically measure and assess these cognitions.

This study concerned itself with irrational beliefs as moderating variables for the relationship between the Life Experiences Survey and the Beck Depression Inventory.

Method

Two hundred eighty six undergraduates, 141 males and 145 females, were administered the Beck Depression Inventory (BDI) the Life Experiences Survey (LES) and the Irrational Belief Test (IBT).

Results

As in previous research. significant positive correlations were found between the LES and BDI. There were also significant positive correlations between the IBT and BDI. as well as for 5 specific subtests of the IBT.

The moderating effect was analyzed by examining the correlations between the LES and BDI for each quartile of the IBT. No systematic pattern of correlations emerged. The IBT was not a moderator of the life stress-depression correlations for this sample.

Interpretation

The fact that significant relationships between irrational beliefs and depression were found. while no relationship between varying degrees of irrationality and the life stress depression relationship were obtained. constitutes a need for reevaluation and/or reconceptualization of viewing cognitions as a crucial agent for change with depressed persons. It may be that irrational beliefs

are cognitive aspects of the depressed state as opposed to causal agents in depression.

INTRODUCTION

Considerable theory and research have focused on the concept of "life stress" in recent years. Life stress is defined as major changes such as divorce, loss of employment or death of a family member occurring in the individual's life. A number of studies have suggested that such changes can be stressful by finding weak but significant correlations between measures of life stress and a variety of psychological and health variables (Rabkin & Streuning, 1976; Dohrenwend & Dohrenwend 1974).

Two instruments have been widely used to assess life stress. Holmes and Rahe (1967) developed the Survey of Recent Events (SRE). This scale is composed of 43 events weighted by a panel of judges as to stressfulness. Research on this cale has found correlations between the SRE and sudden cardiac death (Rahe & Lind 1971), mental distress (Vinokur & Selzer 1975), marital problems (Paykel, Myers, Deenelt, Klerman Lindenthal, & Pepper, 1969) and depression (Ilfeld, 1977). A more recent scale, the Life Experiences Survey (LES) developed by Sarason, Johnson, and Siegel (1978) is composed of similar items, but allows subjects to weigh subjectively the stressfulness of each event and to distinguish between positive and negative

life changes. Sarason et al. (1978) failed to find a significant correlation between positive life change and stressful events but found empirical evidence from the 57 item Life Experiences Survey yielding support for the notion that negative life change is stressful. Significant correlations have been found between the LES and measures of anxiety, job satisfaction, academic performance, and depression (Benton, 1972; Harris 1973; Sarason & Johnson, 1979; Sarason, Johnson, & Siegel, 1978).

Existing literature on life stress and depression has focused on two primary assumptions: (a) that life change requires adaptation and is stressful for the individual, and (b) persons experiencing marked degrees of life change during the recent past are more likely to experience physical and psychological problems (Sarason, Johnson, & Siegel, 1978).

While research has supported the relationship between life stress and depression, the weak correlations may be accounted for by other variables operating within the relationship (Constantini, Braum, Davis, Iervolino, 1973). The degree to which life stress is associated with depression may be a function of moderating environmental and/or personal characteristics. Typically, moderators are viewed as variables which may account for a portion of the variance in a correlation or may cause one variable to change

its direction and/or intensity at different levels of another variable. Many theories have focused on the effects of life stress upon illness, affective states, and behavioral functioning; yet few implications can be made regarding the causal nature of stress or its relationship to moderating variables. Several theories of depression have been proposed which place emphasis on moderating variables. The view that depression is a result of the person's negative cognitions have been reported by Beck (1967), Ellis (1962), and Seligman (1972).

Beck (1967) argues that depression results from a constellation in which the individual perceives the self the world, and the future in a negative way. The moderating variable in this theory is conceptualized as the person's negative expectations of their own effectiveness in the face of stress which caused the negative constellation.

Seligman (1972) proposed that depression is the result of attributions of "helplessness" which result from the individual's previous inability to deal with aversive events. It is not the stress events themselves that produce depression, but rather stress plus the perceptions that we cannot control events.

Finally, Ellis (1962) conceptualized depression as irrational beliefs that result in distortions of the environmental events.

Ellis' basic premise states that our faulty cognitions, which he terms irrational, are responsible for our misperceptions and misinterpretations about events which occur. The result of our misinterpretations is a negative affective state. Ellis proposes that we intervene on a cognitive level since our cognitions moderate and cause depression.

While a considerable number of theories have supported the notion that depressed persons distort the environment, few attempts have been made to empirically measure and assess these cognitions until the development of the Irrational Beliefs Test (IBT) (Jones, 1968). The IBT is comprised of 100 items which yield a total score for irrationality and ten subtests which are designed to measure individually Ellis' ten irrational beliefs. Significant correlations have been found between irrational beliefs and depression (Nelson 1977; LaPointe & Crandell, in press) which suggest a relationship between holding irrational beliefs and feeling depressed. Stronger correlations have been found between depression and the specific beliefs concerned with seeking approval, high expectations, and anxious overconcern. A weak sex difference was reported by Nelson (1977) and by Jones (1968) which suggests that the correlation between depression (as measured by the Beck Depression Inventory) and the Irrational

Beliefs Test for males exceeds those for females. While there is much evidence to suggest that irrational beliefs may moderate stress, there have been no data to demonstrate that irrational beliefs are moderators in the life stress-depression relationship.

METHOD

Subjects

The sample consisted of 286 subjects drawn from under graduate psychology courses at a University during the months of March through June 1980 Each subject received course credit for participation. The sample was composed of 141 males and 145 females of which 268 were Whites and 18 were Blacks.

Procedure

Each subject completed three questionnaires, which are briefly described below.

The Beck Depression Inventory (Revised) is a 21 item questionnaire designed to assess the overt behavioral manifestations of depression (Beck, Rush Dhaw Emery, 1979).

The Life Experiences Survey (LES) is a 60 item survey used to assess the degree of life stress an individual experiences 12 months prior to taking the LES (Sarason & Johnson 1979). The LES was revised slightly to assess the type of event (positive, neutral, or negative) independent of its associated degree of stress. The degree of stressful impact was rated on a scale from zero (no stress) to four (extreme stress).

The Irrational Beliefs Test (IBT) is a 100 item questionnaire designed by J. G. Jones in 1968 to assess cognitive self statements and interpretations about given situations. Each item consists of a statement based on one of Ellis' ten irrational beliefs. The statement is rated on a four item scale from strong disagreement to strong agreement.

RESULTS

Significant positive correlations were found between the Life Experiences Survey and the Beck Depression Inventory $r(286) = .30$, $p < .001$, and Life Experiences Survey and the total score of the Irrational Beliefs Test, $r(286) = .22$ $p < .001$ as in previous research. There were also significant positive correlations for IBT total and Beck, $r(286) = .30$, $p < .001$, as well as for subtests IB 1 (approval), IB 2 (high self expectations) IB 4 (frustration reactivity), IB 6 (anxious overconcern), IB 7 (problem avoidance) and IB 9 (helplessness). The means for each of the irrational beliefs as well as all the inventories used in the study were calculated for the sample used (Tables 1 and 2). In contrast to previous studies using college student populations, all the computed means for the variables used were similar to the means found in previous research (LaPointe & Crandell, 1982) with the exception of the mean calculated for the Beck Depression Inventory which was lower for the present sample. (Table 3)

To examine the moderating effect of irrational beliefs on the life stress depression relationship, each irrational belief score was divided into quartiles and correlations between the Life Experiences Survey and the Beck Depression Inventory were

examined for each quartile. As may be seen in Table 4, no systematic pattern of correlations between the Life Experiences Survey and the Beck Depression Inventory emerged for the different quartiles of the Irrational Beliefs Test. The pattern, in fact, appears to be purely random. Although the Irrational Beliefs Test correlates significantly with the Beck Depression Inventory, it is not a moderator of the life stress depression correlations for this sample.

DISCUSSION

The primary purpose of this study was to examine the role of irrational beliefs as moderators inthe life stress-depression relationship particularly as proposed by Ellis (1962). The proposed model comprised a three-step process consisting of: (a) establishing a relationship between life stress and depression; (b) establishing a relationship between irrational beliefs and depressio n; and (c) demonstrating a moderating effect of irrational beliefs on the stress-depression relationship. While the present study replicated previous findings on the relationships among life stress and depression, it does not support Ellis' view that the Irrational Beliefs Test is a measure of cognitive moderators of the life stress-depression relationship.

The present study investigated the following specific hypotheses: (a) life stress will correlate significantly with depression, and (b) these correlations will be stronger for those persons who engage in few irrational beliefs. While the first part of the hypothesis was supported by the present study, no support was provided for irrational beliefs having a moderating effect on the life stress-depression relationship. Generally, nonsignificant relationships were obtained for the total irrationality score and for each irrational belief as a moderator for

depression. There was, however, a tendency for persons who had elevated scores on the Beck Depression Inventory to have elevated scores on the Irrational Beliefs Test. The lack of support found in the present study for moderating effects of irrational thinking leads us to question the cognitive theories of depression proposed by Beck (1967), Seligman (1972), and Ellis (1962).

The fact that significant relationships between irrational beliefs and depression were found, while no relationship between varying degrees of irrationality and the life stress-depression relationship were obtained, constitutes a need for reevaluation and/or conceptualization of viewing cognitions as the crucial agent for change with depressed persons.

Given the significant relationship found between irrational beliefs and depression and the inability to find evidence for the moderating effects of irrational thinking, is it that the Irrational Beliefs Test is simply a measure of cognitive aspects of the depressed state? Because irrationality appears to be a prominent feature of depression, the failure of this study to establish this feature as a moderator argues against the assumption that irrational cognitions are moderators or causal agents in depression. Instead, it appears

that irrationality may be simply an aspect of the depressive state. It should be noted that the results of this study, as in most analogue studies which employ college student populations, may be an underestimate of the moderating effects of the irrational beliefs. Due to the lower level of depression found in most nonclinical populations, it is possible that a more clinically depressed population may evidence a different trend in the data.

In summary, findings of the present study provide support for the significant relationship between life stress and depression along with the significant relationship between irrational beliefs and depression. It does not provide support for irrational beliefs as moderators of the life stress-depression relationship. The correlations between the IBT and the Beck Depression Inventory suggest simply that one cognitive feature of depression is that individuals are likely to endorse irrational beliefs; irrational beliefs are a correlate rather than a moderator of depression.

The implications of this study are twofold. It appears that the lack of evidence supporting the moderating effects of irrational thinking on the life stress-depression relationship may call into question many of the currently employed treatment approaches

to depression. By placing primary emphasis on altering the individual's cognitions, we may be treating a "symptom" or component of the depressed state as opposed to intervening at a level which may have more impact in alleviating the negative affective state. The second implication of this study focuses upon direction for future research. It may be of lesser importance to debate the issue of which treatment strategy is most effective and more important to direct our aims at establishing which intervention is appropriate for which population. If moderators or predictors of the life stress-depression relationship can be established, this may facilitate primary prevention and/or more immediate tertiary prevention in our clinical settings.

Table 1

Correlations Between Irrational Beliefs Factors and Beck Depression Inventory

		Subtests	Correlations
IB	1	Approval	.13*
IB	2	High self-expectation	.18**
IB	3	Blame proneness	.02
IB	4	Frustration reactivity	.31***
IB	5	Emotional irresponsibility	.95
IB	6	Anxious overconcern	.39***
IB	7	Problem avoidance	.28***
IB	8	Dependency	-.05
IB	9	Helplessness	.32***
IB	10	Perfectionism	-.04
IB	total	Total irrationality	.30***

*$p < .05$
**$p < .01$
***$p < .001$

Table 2

Means of Irrational Beliefs Tests

		Subtests	Means
IB	1	Approval	30.5
IB	2	High self-expectation	30.7
IB	3	Blame proneness	31.7
IB	4	Frustration reaction	30.2
IB	5	Emotional irresponsibility	25.8
IB	6	Anxious overconcern	31.9
IB	7	Problem avoidance	27.8
IB	8	Dependency	31.4
IB	9	Helplessness	28.5
IB	10	Perfectionism	30.5
IB	total	Total Irrationality	298.5

Table 3

Means for Variables Measured

Variable	Inventory	Means	Standard Deviation
Depression	Beck Depression Inventory	4.8	5.5
Stress	Life Experience Survey	16.0	14.0
Irrational Beliefs	Irrational Beliefs Test	300.0	41.1

Table 4

LES-Beck Correlations for the Quartiles of the Irrational Beliefs Test

		Subtests	Quartiles 1	2	3	4
IB	1	Approval	.04	.40**	.17	.28
IB	2	High self-expectation	.19	.16	.20	.44
IB	3	Blame proneness	.36***	.13	.24*	.37**
IB	4	Frustration reaction	.16	.09	.31*	.32**
IB	5	Emotional irresponsibility	.12	.26*	.31**	.29
IB	6	Anxious overconcern	.18	-.01	.35**	.22
IB	7	Problem avoidance	.14	.33**	.17	.32*
IB	8	Dependency	.39***	-.06	.30*	.16
IB	9	Helpessness	.17	.37***	.13	.06
IB	10	Perfectionism	.33**	.29*	.18	.08
		Total	.21	.11	.24	.17

*$p < .05$

**$p < .01$

***$p < .001$

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